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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,848	12/21/2000	Vladislav Vashchenko	NSC1-H2000 (P04846)	4415

7590

05/01/2003

Mark C. Pickering  
Law Offices of Mark C. Pickering  
P.O. Box 300  
Petaluma, CA 94953-0300

EXAMINER

NADAV, ORI

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 05/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/747,848

Applicant(s)

VASHCHENKO ET AL.

Examiner

ori nadav

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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## DETAILED ACTION

### *Claim Objections*

1. Claims 21-30 are objected to because of the following informalities: The phrase "greater than the well region", as recited in claims 21 and 24, should read "greater than that of the well region".

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 16-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wei et al. (5,843,813).

Wei et al. teach in figure 20 and related text an ESD protection structure formed in a P type semiconductor material 290 comprising an isolation region (the FOX region located between regions 250a and 250b) formed in the semiconductor material, an N+ first region 256 formed in the semiconductor material, an N-well region 292 in the

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semiconductor material, contacting the isolation region, being spaced apart from the N<sup>+</sup> first region 256, having a dopant concentration less than that of the first region, and not contacting an N<sup>+</sup> region, a P<sup>+</sup> second region 250b formed in the well 292, contacting the isolation region, the first region 256 and the second region 250b lying on opposite sides of the isolation region (the isolation region located between regions 250a and 250b).

Figure 20 of Wei et al. does not depict that the second region is connected to an electrical pad. Wei et al. teach in figure 18 a second region 250 connected to an electrical pad. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to connect the second region to an electrical pad in Wei et al.'s device in order to operate the device in its intended use.

Regarding claims 18, 20 and 30, figure 20 of Wei et al. does not depict a first region connected to ground. Wei et al. teach in figure 18 a first region 256 connected to V<sub>dd</sub> voltage. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to connect the first region to ground in Wei et al.'s device in order to operate the device in an application which requires to reverse the polarity of the transistor.

Regarding claims 19, 21, 22 and 24, Wei et al. teach in figure 20 a first region 256 is positioned such that no other P type region having a dopant concentration greater than

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that of the P well region (that is, a P+ region) lies between the first region 256 and the isolation region.

Regarding claim 24, figure 20 of Wei et al. does not depict a second region connected to an amplifier. Wei et al. teach in figures 1 and 17 a second region connected to an amplifier. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to connect the second region to an amplifier in Wei et al.'s device in order to operate the device in its intended use, in an application which requires an amplifier.

Regarding claims 28 and 29, figure 20 of Wei et al. does not depict a plurality of protection diodes. Wei et al. teach in figure 1 a plurality of circuits in an output buffer circuit configuration. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a plurality of protection diode circuits in Wei et al.'s device in order to operate the device in its intended use, in an application which requires a plurality of circuits in an output buffer circuit configuration.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 16-30 have been considered but are moot in view of the new ground(s) of rejection.

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***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Papers related to this application may be submitted to Technology center (TC) 2800 by facsimile transmission. Papers should be faxed to TC 2800 via the TC 2800 Fax center located in Crystal Plaza 4, room 4-C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG**

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**30 (November 15, 1989). The Group 2811 Fax Center number is (703) 308-7722 and 308-7724. The Group 2811 Fax Center is to be used only for papers related to Group 2811 applications.**

Any inquiry concerning this communication or any earlier communication from the Examiner should be directed to *Examiner Nadav* whose telephone number is **(703) 308-8138**. The Examiner is in the Office generally between the hours of 7 AM to 4 PM (Eastern Standard Time) Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas, can be reached at **(703) 308-2772**.

Any inquiry of a general nature or relating to the status of this application should be directed to the **Technology Center Receptionists** whose telephone number is **308-0956**



O.N.  
April 30, 2003

ORI NADAV  
PATENT EXAMINER  
TECHNOLOGY CENTER 2800